SUPPLEMENTARY SEMINAR ITEMS

Item 1.

Mpigi district development officials recently cleared a group of youths in the district to set up a bakery. However, the officials have cautioned the youths to use sustainable and environment friendly packaging materials for their bakery products.

As a result, the youths have organized a meeting to discuss possible alternative packaging materials.

Task

As a learner of chemistry, write a short message you would deliver to the youths upon invitation. In your message:

(a) Explain
    (i) The categories of materials
    (ii) The suitability of the materials
(b) Advise the youths on the choice of materials

Item 2.

Joan and Priscilla went to wash their clothes at a nearby well surrounded by rocks. Joan used detergent **T** and Priscilla used detergent **Q**. Two days later, Joan realized that her white clothes had some dirty marks yet she rinsed them with water several times. Priscilla on the other hand never had such complaints.

Joan is now frustrated and cannot understand what went wrong. The two ladies have approached you to help them understand the situation.

Task

As a chemistry learner, write a message you will share with the two ladies. In your message:

(a) explain categories of product used by the ladies
(b) help the two ladies understand how the product works
(c) advise the two ladies on the challenges associated with the use of the products.

Item 3.

Muhumuza is in the process of making good and strong windows for his newly constructed house without affecting the environment. He is aware that there are various materials on the market for making windows. He also knows that in order to have good quality windows, he should select the right materials with suitable qualities and properties. However, he is still confused with the choice and has approached you for some advice.

Task

As a chemistry learner:

(a) explain
    (i) the categories of materials
    (ii) the suitability of the materials
(b) advise Muhumuza on the choice of materials

Item 4.

Nabacwa, a 25-year-old woman always visits her grandmother whenever she falls sick. She trusts her grandmother's skill as a traditional healer. One day, on her way to the well with a friend, she fell down and felt pain on the knees but had no bruises.

Her friend rushed her to one of the local health centres although she wanted to go to her grandmother. At the health centre, she was given aspirin tablets. After taking some rest, she was surprised that the pain had reduced. She has approached you to help her understand why the pain disappeared.

Task

As a chemistry learner, write down a message you would share with Nabacwa. In your message, include:

(a) the category of the product Nabacwa used
(b) the function of the product
(c) advise Nabacwa on the challenges associated with the use of the product.

Item 5.

In Bulambuti village, Manafwa District, a community hall that was constructed recently has developed several huge cracks and is about to collapse. The residents are very angry and planning to arrest and beat up the manager of the construction firm that was hired to build it, accusing him of using sub-standard materials.

The chairperson of the village council has coordinated with the Community Development Officer and organized a meeting with the residents to discuss possible alternatives to rebuild the community hall without affecting the environment.

Task

Use your knowledge of chemistry to:

(a) explain the
    (i) categories of materials they can consider
    (ii) suitability of the materials
(b) advise the residents and concerned authorities on the choice of materials

Item 6.

Jacinta opened up a new restaurant in one of the towns on the outskirts of Mbarara City. Her restaurant receives many customers during lunch time because of the good taste of the food she serves. The other restaurants in the area often receive only a few customers even on the market day. This has created conflicts between Jacinta and other restaurant owners and resulted into endless quarrels among them.

The mayor of the area understands that the cause of the quarrels are the ingredients used by the different restaurant owners. He has scheduled a meeting to solve the issues at hand.

Task

As a chemistry learner, write down a short message you would deliver when invited to the meeting.

In your message:

(a) categorise the ingredients
(b) explain the suitability of the ingredients
(c) advise the restaurant owners on the use of the ingredients

Item 7.

Isaac is a renowned cyclist in Gayaza town and always gets his treatment from his grandmother who is traditional herbalist. One day on his way back home, he fell off his motorcycle and got bruises on both knees. Passers-by rushed him to the nearest clinic for treatment instead of being taken to his grandmother. At the clinic he was given some penicillin tablets and advised to take them for five days.

To his surprise, his wounds healed fast and he was able to go back to work by the end of the week. He has approached you to help him understand why he was able to get relief.

Task

As a learner of chemistry, write a message you would share with Isaac. In your message, include:

(a) the category of the product
(b) the function of the product
(c) advice you would give Isaac about using the product

Item 8.

One of the large scale uses of sulphuric acid is in the making of paints. To ensure that sulphuric acid is readily available at a cheaper cost, government has cleared a local investor to set up a sulphuric acid production plant in Kilembe town in Kasese District.

The locals are wondering how the production of sulphuric acid will be done. Therefore, your school has decided to sensitise the community as part of its community engagement drive.

Task

Prepare a brief presentation you will make during the sensitization campaign.

Item 9.

Due to the increased demand for copper in making electric vehicles worldwide, there has been a surge in its prices on the international market. To meet the local needs, the government is seeking to revive copper production in Kilembe. This news has left some residents worried about the environment and their land while others are eager to see how the copper production will be done.

A radio talk show has been organized by the Ministry of Minerals Development to sensitise the locals about developments around the copper mine.

Task

As a learner of chemistry, prepare a presentation you would make upon invitation.

Item 10.

For the past 20 years, Tororo district started developing at a fast pace, with many trading centres being established in different villages. The development has seen many swamps being reclaimed and forests cleared to make space for new buildings. Stone quarrying has become popular to meet the demand for the on-going construction in the area. The senior citizens are wondering why the wells and springs are slowly drying up and the water not being fresh as it used to be. They have also noticed changes in seasons and poor harvests which have led to famine.

The issues were communicated to the District Environment Officer who in turn raised them in one of the district council meetings.

Task

Prepare a presentation you would share when asked by the council members, using the knowledge of Chemistry.

Item 11.

Due to a ban on its importation, a soap factory has run short of one of the essential raw materials, sodium hydroxide. The top management of the factory has made a decision to start producing the sodium hydroxide locally and is seeking clearance from the relevant authorities including the National Environment Management Authority and local council leaders.

A workshop has been organized for all the stakeholders involved. The local council leaders wish to understand how the production will be done while the NEMA must make a report on the environmental impact of the factory activities.

Task

Use the knowledge of chemistry to write speech you would present during the workshop.

Item 12.

The hills of Rushekye in Kisoro district offer a picturesque landscape. Recently, it was discovered that they are rich with iron deposits. In order to relieve the steel-rolling mills the burden of importing raw iron, the government is going to set up an iron production plant in the area.

The local residents feel that the government wants to steal their land and the plant will not benefit them. They also wonder how steel bars can be obtained from mere rocks. They have organized a protest at the district headquarters where the District Development Officer has agreed to respond to their issues through a talk show on the local radio.

Task

As a learner of chemistry, prepare a presentation you would give on the talk to calm down the residents.

Item 13.

River Rwizi is located in Mbarara District, south western Uganda, a place well known for large scale cattle keeping. The people around the river engage in sand mining and brick making to benefit from the bustling construction industry in the area. Individuals have also cut down trees to set up nursery gardens for flowers and exotic tree species along the river. Of recent, the water levels have reduced drastically and the water in the river is not fresh anymore. This has left the local leaders and residents worried.

These developments caught the attention of the Rotary Club which decided to organize a charity run to save River Rwizi.

Task

As a student of Chemistry, write a message you would share with the runners to achieve the objectives of the charity.

Item 14.

Soap is a common substance that is used to facilitate washing and has become a basic need for nearly all households. However, the prices of soap in the country have recently risen extremely sparking a countrywide uproar. The government has attributed this to only a few companies engaging in soap production. Musisi is a local investor and wants to set up a soap factory in his village in Mayuge District. However, the community members need assurance that the factory will have minimum impact on the environment and their land is safe. The chairman wants to know how the soap will be made.

The science club of your school has been contacted by the investor and local council members to talk to the community members.

Task

As a chemistry learner, write down a message you will use during the presentation.

Item 15.

Fertilisers are often added to soil to boost its productivity. One such fertilizer is ammonium nitrate which is often imported into the country and sold to farmers expensively. To boost the agriculture sector, the government is willing to help farmers cut the costs of production and has decided to give incentives to local investors who are willing to engage in production of the fertilizer. Bloom Investments has decided to take up this opportunity by setting up a factory in Kyegegwa District.

Through their local leaders, the members of the local community have organized a gathering at which the owners of the factory will explain how the fertilizer will be produced with minimum impact on the environment.

Task

Using the knowledge of chemistry, write a message you will present to the members of the community at the gathering.

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